

### **REMARKS**

The foregoing amendment amends claim 6, cancels claims 7-8 and 12-13, and adds claims 14-15. Now pending in the application are claims 1-6, 9-11 and 14-15, of which claims 1, 3, 6 and 10 are independent. The following comments address all stated grounds for rejection and place the presently pending claims, as identified above, in condition for allowance.

#### **Patentable Subject Matter**

Applicants thank the Examiner for passing claim 3 to allowance. Claims 2, 5, 9 and 11 are also indicated to recite patentable subject matter and would be allowable if rewritten in independent form. In light of the foregoing claim amendments and the arguments set forth below, Applicants request the Examiner to pass claims 2, 5, 9 and 11 to allowance.

#### **Claim Amendments**

Claim 6 is amended to clarify the scope of the claimed invention. In particular, Applicants amend claim 6 to recite that each of the first to fourth tapering surfaces is inclined in the same direction with respect to the axis of the ringlike core member. Support for the claim amendments can be found in the figures and corresponding descriptions of the pending application. No new matter is added.

#### **Claim Rejections - 35 U.S.C. §102**

Claim 10 is rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 3,273,505 ("Miles"). Applicants respectfully traverse this rejection for the following reasons.

Independent claim 10 recites an electromagnetic actuator. The electromagnetic actuator includes a ringlike armature member arranged *entirely* radially outside of the ringlike core member.

Applicants respectfully submit that the cited prior art reference fails to disclose each and every element of the claimed invention. Applicants submit that Miles fails to disclose a ringlike armature member arranged *entirely* radially outside of the ringlike core member, as recited in claim 10. Miles discloses in Fig. 1 that the armature (56) is arranged axially outside of the core (78). Miles, however, does not disclose that the armature (56) is arranged *entirely* radially outside of the core (78), as recited in the claimed invention.

In light of the foregoing arguments, Applicants submit that Miles fails to disclose each and every element of claim 10. Applicants therefore request the Examiner to reconsider and withdraw the rejection of claim 10 under 35 U.S.C. §102(b), and pass the claim to allowance.

#### Claim Rejections - 35 U.S.C. §102

Claims 12-13 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,525,695 ("Sheng"). In the foregoing claims amendments, claims 12-13 are canceled. In light of the claim amendments, Applicants submit that the rejection of claims 12-13 under 35 U.S.C. §102(b) is moot, and therefore request the Examiner to withdraw the rejection of claims 12-13 under 35 U.S.C. §102(b).

#### Claim Rejections - 35 U.S.C. §103

Claims 1 and 4 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 2,025,098 ("Dudick") in view of U.S. Patent No. 3,273,505 ("Miles"). Applicants respectfully traverse this rejection for the following reasons.

Independent claim 1 recites an electromagnetic brake. The electromagnetic brake includes a ringlike armature member arranged *entirely* radially outside of the ringlike core member.

Applicants respectfully submit that the cited prior art references fail to teach or suggest all of the limitations of the claimed invention. Applicants submit that Dudick and Miles fail to teach or suggest a ringlike armature member arranged *entirely* radially outside of the ringlike

core member, as recited in claim 1. The Examiner notes in the Office Action that Dudick does not teach the ringlike amateur member of the claimed invention. Miles is cited by the Examiner to compensate for the deficiency.

Applicants submit that Miles also does not teach or suggest that the ringlike armature member is arranged *entirely* radially outside of the ringlike core member, as recited in claim 1. Miles teaches in Fig. 1 that the armature (56) is arranged axially outside of the core (78). Miles, however, does not teach that the armature (56) is arranged *entirely* radially outside of the core (78), as recited in the claimed invention.

In light of the foregoing arguments, Applicants submit that Dudick and Miles fail to teach or suggest all of the limitations of claim 1. Claim 4, which depends upon claim 1, is not rendered obvious over the cited prior art references. Applicants therefore request the Examiner to reconsider and withdraw the rejection of claims 1 and 4 under 35 U.S.C. § 103(a), and pass the claims to allowance.

#### Claim Rejections - 35 U.S.C. §103

Claims 6-8 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 2,025,098 ("Dudick") in view of U.S. Patent No. 4,525,695 ("Sheng"). Applicants respectfully traverse this rejection for the following reasons.

Independent claim 6 recites an electromagnetic brake. The electromagnetic brake includes a ringlike core member having a first tapering surface inclined a first angle with respect to the axis of the ringlike core member. The electromagnetic brake also includes a ringlike armature member having a second tapering surface complementary in shape to the first tapering surface. The ringlike core member further includes a third tapering surface inclined a second angle with respect to the axis of the ringlike core member, and the ringlike armature member further includes a fourth tapering surface complementary in shape to the third tapering surface. *Each of the first to fourth tapering surfaces is inclined in a same direction with respect to the axis of the ringlike core member.* Claims 7-8 are canceled.

Applicants respectfully submit that the cited prior art references fail to teach or suggest all of the limitations of the claimed invention. Applicants submit that Dudick and Sheng fail to teach or suggest that *each of the first to fourth tapering surfaces is inclined in the same direction with respect to the axis of the ringlike core member*, as recited in claim 6. The Examiner notes in the Office Action that Dudick does not teach the ringlike amateur member of the claimed invention. Sheng is cited by the Examiner to compensate for this deficiency.

Applicants submit that Sheng also does not teach or suggest that *each of the first to fourth tapering surfaces is inclined in the same direction with respect to the axis of the ringlike core member*, as recited in claim 6. Sheng teaches a force motor (10) in which the armature (48) is guided by a plurality of balls (84) that contact both an internal tube assembly (47) and the armature (48). Sheng teaches that each of the tapering surfaces is inclined in different directions with respect the axis of the armature (48). Sheng does not teach that each of the tapering surfaces is inclined in the same direction with respect to the axis of the core member, as recied in the claimed invention.

In light of the foregoing claim amendments and arguments, Applicants submit that Dudick and Sheng fail to teach or suggest all of the limitations of claim 6. Applicants therefore request the Examiner to withdraw the rejection of claims 6-8 under 35 U.S.C. §103(a), and pass claim 6 to allowance.

#### New Claims

New claims 14 and 15 are added to depend upon claim 6. Claim 14 recites a first annular restriction member removed from amended claim 6. Claim 15 recites a second annular restriction member included in canceled claim 8. In light of the foregoing amendment and arguments, Applicants submit that new claims 14 and 15 are patentable over the cited prior art references and in condition for allowance.

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Conclusion

In view of the foregoing claim amendments and arguments, Applicants believe the pending application is in condition for allowance. Applicant believes no fee is due with this statement. However, if a fee is due, please charge our Deposit Account No. 12-0080, under Order No. MTW-001 from which the undersigned is authorized to draw.

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Respectfully submitted,

By 

Anthony A. Laurentano  
Registration No.: 38,220  
LAHIVE & COCKFIELD, LLP  
28 State Street  
Boston, Massachusetts 02109  
(617) 227-7400  
(617) 742-4214 (Fax)  
Attorney/Agent For Applicant